

ABSTRACT OF THE DISCLOSURE

In a condenser of a steam turbine facility, which conventionally releases exhaust heat thereof into the ocean or the air, liquid carbon dioxide (approximately 20°C, approximately 5.7MPa), instead of the ocean water or air as conventionally used, is used as a cooling medium, and heat recovery is carried out utilizing boiling heat transfer having high heat-removing performance. Gaseous carbon dioxide resultantly generated is directly used as an operational heat medium of a heat pump, and a pressure thereof is raised to 12MPa or so, thereby a temperature thereof is raised to recover heat of 80°C or so, which is provided for heating, etc. Thereafter, the pressure is lowered to condense the carbon dioxide into liquid phase (approximately 20°C, approximately 5.7MPa), and is used for cooling in the condenser again. Accordingly, exhaust heat can be recovered and recycled economically, and restricted from being released to an outside environment.

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